

Below you will see a list of infrastructure and defense projects Congressman Todd Akin requested support for during the 2009 appropriations process.

Defense Appropriations Requests

in alphabetical order

Adaptive-Defense HIPPIE (High-speed Internet Protocol Packet Inspection Engine) on a Chip

Amount: \$6M

TechGuard Security, LLC
743 Spirit 40 Park Drive, Chesterfield, MO 63005

The U.S. Army Battle Command Battle Laboratory - Huachuca endorses the development of a promising technology using the proven HIPPIE filtering technology, and miniaturizing it to significantly enhance security on a chip with Nano-power supply. ADHOC Chip Destruct will facilitate discreet deployment with secure remote-controlled chip-level destruction in the event a device is compromised, which adds a much needed level of security to the U.S. Army Future Force.

Air filtrations systems for helicopters

Amount: \$2M

Aerospace Filtration Systems, Inc.
4 Research Park, Suite 200, St.Charles, MO 63304

Installing Inlet barrier filtration systems on Army National Guard helicopters will provide dramatic savings by reducing engine replacements, increase overall engine performance, reduce maintenance TBO, and increase readiness rates of the fleet.

Aircrew Body Armor and Load Carriage Vest System

Amount: \$9M

Eagle Industries
1000 Biltmore Drive, Fenton, MO 63026

"Currently issued aircrew flight equipment survival vests are not body armor-compatible due to weight, heat, and survivability concerns. Current issue is not fire retardant and fails to meet the present needs of the U.S. Air Force.

Eagle Industries and the U.S. Air Force have developed an integrated body armor vest system that provides fire retardancy and ballistics protection from a wide array of threats including small arms fire, fragmenting shrapnel and spall, while decreasing the heat stress and weight burdens faced by airmen. The U.S. Air Force approved the resulting Aircrew Body Armor and Load Carriage Vest System for use, and specific units have made initial purchases for delivery. However, Congressional funding is urgently needed to support the manufacture and delivery of 18,000 systems for optimum survivability of Air Force personnel on all Air Combat Command, Air Force Special Operations Command, and Air Mobility Command aircraft."

Backpack Medical Oxygen System (BMOS)□

Amount: \$2.9M

Essex Cryogenics
807 Chivvis Drive, St. Louis, MO 63123

This program is focused on improving oxygen generation technology for aeromedical evacuation and emergency field medical rescues. The program would improve and develop Backpack Medical Oxygen System (BMOS) to the next generation of use by Special Operations

users in the USAF, USN, U S Coast Guard and the US Army. The BMOS is the device that satisfies the USAF Requirement for Deployable Oxygen Generator System - Small (DOGS-S). The BMOS and the BMOS Filling Station are currently in use with combat forces in Iraq. This spiral development program for the BMOS system will significantly decrease the time and funds required to field critical capabilities needed today by our warfighters.

Bonded Cellular Aluminum Tail Rotor Blades

Amount: \$3.6M

Goodrich Corp (Riverside, CA) & Kemco Aerospace Manufacturing
3616 Scarlet Oak Blvd, St. Louis, MO 63122

These funds will be used to develop, design, analyze, fabricate, and test advanced ballistic tolerant, robust aluminum cellular bonded aluminum tail rotor blades for the Apache AH-64. This technology offers significant advantages compared with current production tail rotor blades that were designed over 30 years ago, including 82% reduced parts count, integrated root end fitting, aerodynamic optimizations, significantly enhanced battle damage tolerance and field reparability benefits. The tongue and groove joint structures reduce the amount of touch labor required as well as tooling costs. This has the potential to reduce procurement costs by 20-30%.

High Power Electrolytic Super-Capacitors Based On Conducting Polymers

Amount: \$9M

Crosslink, Inc.
950 Bolger Court, St. Louis, MO 63026

This project will develop extremely compact, high capacity, and quick discharging/recharging energy storage systems that are capable of high power pulses, on the order of megawatts, delivered in the hundreds of microseconds to one millisecond time range to be successful. This critical technology needs to be developed and manufactured by US-based companies in order to maintain the strategic capability for this application and to be further deployed in future defense systems and energy weapons.

Hyper-IFP (Hyper spectral Sensor for Improved Force Protection)

Amount: \$5.4M

Clean Earth Technologies, LLC
13378 Lakefront Drive, Earth City, MO 63045

The Night Vision Electronic Sensors Directorate, Ft. Belvoir Virginia, built the initial Cerberus Units and Suicide Gauntlet systems in teaming arrangements with a number of varied small businesses. However, these initial systems will benefit from more sensing modalities to increase probability of correct detection/identification. The introduction of a Hyper-IFP is allowing the detection and recognition of humans (with a near zero false alarm rate) and leverages Hyperspectral imaging but focuses on specific force protection targets, human skin and people's behavior. To date successful development, test and evaluation has been done in the lab. The continued funding of Hyper-IFP in FY2010 will operationalize and integrate the knowledge gained in the lab and apply it in a true-fielded application at an affordable cost. This is a very judicious use of taxpayer funds as it allows the DOD to significantly enhance existing capability for a very small investment. Hyper-IFP is focused on the missions of Perimeter Security, Suicide Bomb Detection and Urban Route Recon. This is a critical mission area that the DOD is constantly engaged in. In the end, this request focuses on both achieving data verification, and the delivery of sufficient hardware to validate the Technical Data package for use on a wide variety of DOD sensor packages.

JSOW-ER

Amount: \$6.5M

LaBarge Inc.
9900 Clayton Road, St. Louis, MO 63124

JSOW is a GPS-guided air-to-ground weapon designed to attack a variety of targets in day, night and adverse weather conditions. The 70+ mile range of JSOW allows launch aircraft to

stand off beyond the range of most Surface-to-Air missiles. There is a need for a small number of weapons with greater stand off. Currently the Navy fills this requirement with SLAM-ER, Harpoon and Tomahawk. The Navy completed its relatively small buy of fewer than 500 SLAM-ERs in 2004. A new variant of JSOW (JSOW-ER Block IV) would have a range and lethal capability equal to or greater than SLAM-ER and would satisfy the warfighter's need at less than half the cost of SLAM-ER. An existing engine from the Miniature Air-Launched Decoy program will be used to extend the range of JSOW-ER to more than four times of the current glide version.

Mission Equipment Technology Implementation (METI)

Amount: \$5.3M

QinetiQ North America (Formerly Westar Aerospace & Defense Group)
36 Research Park Ct, St. Charles, MO 63304

Funding is required to complete the METI plan initiated by the Aeromechanics Division 3 years ago. This funding will complete the development of a robust enterprise level data repository that supports the Aviation Engineering Directorate's (AED) airworthiness release mission to rapidly develop and deploy mission equipment tools. The AED will have the capability to data mine and analyze complex data to determine trend information to reduce high cycle times between flight tests and airworthiness releases.

Solid State Laser Weapons System

Amount: \$5M

Northrop Grumman Corporation (for work done in St. Charles, MO)
1000 Wilson Boulevard, Suite 2300, Arlington, VA 22209

As a result of the Joint High Power Solid State Laser (JHPSSL) phase 2 program, solid state lasers have demonstrated entry level weapons-class performance at the 25 kW level. Within the

next two years, the JHPSSL phase 3 program will extend SSL performance to 100 kW - a power sufficient for a broad set of high payoff military applications.

- Funding for this initiative will be used to perform detailed design, analysis, and risk reduction for the field packaging and ruggedization of the JHPSSL3.

- Delaying this work will mandate a more significant after-the-fact modification of JHPSSL3, which will be higher risk, more expensive, and more time consuming than if performed at the outset.

Energy and Water Appropriations Requests

Project: Chesterfield, MO

Request: \$21,300,000

Account: Corps of Engineers CG

The Chesterfield project is located along the right descending bank of the Missouri River between river miles 46 and 38.5. The existing private levee system is 11.5 miles and protects approximately 4,240 acres from the 100-year flood event. During the Great Flood of 1993, the existing levee failed causing flood damages in excess of \$200,000,000.

The project consists of raising the existing levees on the Missouri River and Bonhomme Creek to provide protection from a 500-year flood event along with relief wells, a sheet pile cutoff, and berms to control underseepage. Other features include roadways, railroad and roadway closure structures, retaining walls, relocations, pumping stations with gravity structures, and environmental mitigation features.

The Sponsor has essentially completed earthen portions of the levee to a 500-year level of protection. Closure structures and pump stations still must be constructed. An amount of \$21,300,000 could be used to construct the following structures:

Baxter Road modifications at closure structure \$1,840,000
Baxter Road Phase 2 closure structure \$1,500,000
Baxter Road Ph 2 floodwall and levee modification \$2,000,000
Design Walnut Grove floodwall and RR closure \$ 250,000
Initiate Walnut Grove RR closure structure, Long Rd \$1,215,000
Initiate Walnut Grove floodwall \$3,470,000
Design and build Centaur Rd RR Closure structure \$2,025,000
Design and build protection for Sewer Distr Pump Sta \$ 473,000
Complete plans and fund contract for 4 pump stations \$6,385,000
Associated levee modifications for pump stations \$1,621,000
Partial reimb for Credit Appl #1 for pump station \$ 521,000

These structures will augment completed earth works that provide 500-year flood protection for the largest (in square feet) economic power center in the nation. At risk are over 860 licensed businesses, 12,300 full-time jobs and the revenue they produce.

Project: Meramec River Basin, Valley Park Levee, MO

Request: \$675,000

Account: Corps of Engineers CG

The flood control portions of this 3.2 mile levee project in St. Louis County, Missouri on the left descending bank of the Meramec River are largely complete. Funds would be used as follows:

Install seepage controls at railroad embankment \$ 400,000
Prepare the final operation and maintenance manuals, prep final as-built drawings, conduct final reviews and audits, and perform financial close-out of the flood damage reduction component of the project \$ 275,000

Project: St. Louis, MO (Watershed)

Request: \$400,000

Account: Corps of Engineers GI (New Start)

The study area is comprised of the large river floodplains within the greater Metropolitan St. Louis area and includes the City of St. Louis, the four Missouri Counties of Franklin, St. Charles, St. Louis, and Jefferson, plus the five Illinois Counties of Calhoun, Jersey, Madison, St. Clair, and Monroe. The study will examine the cumulative effects of various types of past development such as levees, flood control reservoirs, river navigation structures, transportation and other infrastructure as well as project the induced flooding effects associated with various types of potential future development. The impacts will broadly address impacts to wetlands, navigation and commercial floodplain activities. These findings could be invaluable to local and regional decision makers as well as to the Corps of Engineers and other Federal planners such as the Federal Emergency Management Agency, in making decisions on the full costs, benefits, and impacts associated with various federal, state and local projects.

Funds requested would be used to initiate the reconnaissance study for this project.

Project: Upper Mississippi River - Illinois WW System, IL, IA, MN, MO & WI

Request: \$35,000,000

Account: Corps of Engineers CG

Also referred to as the Navigation and Ecosystem Sustainability Program (NESP), this project will provide for the first phases of construction of new 1,200 lock chambers at Lock and Dams 20, 21, 22, 24, 25, Lagrange and Peoria; will implement small-scale navigation aids; and begin ecosystem restoration projects along the Mississippi river and Illinois Waterway.

Project: Upper Mississippi River Restoration, IL, IA, MN, MO & WI

Request: \$20,000,000

Account: Corps of Engineers CG

Started in 1986 and sometimes referred to as the Environmental Management Program (EMP), this project soon will be continued in NESP. However, the environmental gains realized during the past two decades must be sustained until the transition to NESP is fully implemented. This project addresses adverse impacts to the aquatic ecosystem caused by maintenance of the river's navigation channel. This includes habitat rehabilitation and measures to determine if enhancement projects are effectively preserving and improving fish and wildlife habitat on the river.

Project: Mississippi River between MO River and Minneapolis, Minnesota (MVS portion), IL

Request: \$21,073,000

Account: Corps of Engineers O&M

This project extends from the mouth of the Missouri River at St. Louis 105 miles upstream to the tail waters of Lock and Dam 22. Funds could be used for current-year O&M as well as for deferred maintenance on an aging system of locks and dams (Locks and Dams 24, 25, and 26 (Mel Price)). Basic O&M would provide a nine-foot navigation channel, regulating works, dike and revetment, dredging, environmental compliance and environmental stewardship.

Deferred maintenance (this request) would provide for the following:

Install bulkhead slots, Lock 25 \$ 1,858,000
Install culvert valve machinery \$ 1,200,000
Repair miter gates, Mel Price Locks \$ 1,395,000
Repair scour area above Dam 24 \$ 6,000,000
Replace chains/sprockets, Locks 24/25 \$ 4,320,000
Replace miter gate mach. w/ direct acting cylinders \$ 1,800,000
Replace defective bulkheads \$ 2,000,000
Replace 80-yr old tainter gate motors, Dams 24/25 \$ 2,500,000

Transportation, Housing & Urban Development Appropriation Requests

New Interchange, US 61 at S. Lincoln Drive, Lincoln County, MO

Request: \$ 400,000
Account: FHWA TCSP

This request will fund the preliminary engineering for a new interchange at the intersection of US 61 and this business loop (South Lincoln Drive). US 61 in Missouri is the continuation of I-64 north of I-70 and is on the National Highway System. Vigorous regional growth has resulted in an accident rate along this corridor - particularly at intersections - that is twice the state average. This location presently is the most critical area of need in Lincoln County along US 61. This new interchange at the south end of the business district in Troy, MO will eliminate a busy at-grade intersection, improve safety, and help alleviate traffic congestion.

Bridge Replacement, MO Rt 79 at Sandy Creek, Lincoln County, MO

Request: \$950,000
Account: FHWA TCSP

MO Route 79 is a heavily traveled 2-lane highway that runs 85 miles northwest along the Mississippi River from I-70 in St. Charles County to Hannibal, MO. This highway provides access to Lock & Dam 25 near Winfield, Lock & Dam 24 near Clarksville, and other communities along the river. This bridge replacement just north of the City of Foley is important to the residents of Foley, to the region, and two major Corps of Engineers projects: The Navigation and Environmental Sustainability Program (NESP), the Environmental Mitigation Program (EMP), as well as for normal Operations & Maintenance (O&M) activities for L&D 24 and 25.

Bridge Replacement, MO Rt 79 at Lost Creek, Lincoln County, MO

Request: \$486,000
Account: FHWA TCSP

MO Route 79 is a heavily traveled 2-lane highway that runs 85 miles northwest along the Mississippi River from I-70 in St. Charles County to Hannibal, MO. This highway provides

access to Lock & Dam 25 near Winfield, Lock & Dam 24 near Clarksville, and other communities along the river. This bridge replacement at the south city limit of the City of Elsberry is important to the residents of the Elsberry, to the region, and two major Corps of Engineers projects: The Navigation and Environmental Sustainability Program (NESP), the Environmental Mitigation Program (EMP), as well as for normal Operations & Maintenance (O&M) activities for L&D 24 and 25.

[L earn how project funding requests are determined.](#)

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